

AMENDMENTS

Amendments to the Claims:

The currently pending and amended claims are below. Please amend the claims following, wherein the deleted matter is shown by strikethrough and the added matter is shown by underlining.

Claims 1-36 (Cancelled)

37. (Currently Amended) A The use of a saposin-related product and/or a modulator/effector thereof to promote development of the protection, survival and/or regeneration of insulin producing cells comprising administering to the cells ~~of a patient in need thereof~~ an effective amount of a saposin-related product and/or a modulator/effector thereof.
38. (Original) The use of claim 37, wherein the insulin producing cells are beta-cells.
39. (Currently Amended) The use of claim 37, wherein the insulin producing cells are of mammalian origin; preferably of human origin.
40. (Currently Amended) The use of claim 37, wherein the insulin producing cells have been transfected with a pancreatic gene; particularly the Pax4 gene.
41. (Currently Amended) The use of claim 37 for the prevention or treatment of a disease associated going along with impaired beta-cell function, particularly for the treatment of beta-cell degeneration in patients suffering from diabetes type I, diabetes type II or LADA, or progressed diabetes type II, or for the prevention of beta-cell degeneration in patients at risk to develop beta-cell degeneration, like for example but not limited to patients suffering from diabetes type I or II, or LADA in early stages

42. (Currently Amended) The use of claim 37, wherein a saposin-related product or a modulator/effector thereof that influences the expression level or function of a saposin-related product is administered to a patient
 - (i) as a pharmaceutical composition e.g. enterally, parenterally or topically directly to the pancreas;
 - (ii) via implantation of saposin-related protein product expressing cells, and/or
 - (iii) via gene therapy.
43. (Original) The use of claim 42, wherein the saposin-related product or modulator/effector thereof is administered in combination with another pharmaceutical composition useful to treat beta-cell degeneration, for example but not limited to hormones, growth factors, or immune modulating agents.
44. (Previously Presented) The use of claim 37, wherein the saposin-related product is a protein including purified natural, synthetic or recombinant saposin-related products and variants thereof.
45. (Currently Amended) The use of claim 44, wherein the saposin-related product is of mammalian origin, preferably human origin, or more preferably selected from proteins or peptides substantially homologous to the human saposin-related precursor proteins as shown in Table 2.
46. (Withdrawn) The use of claim 37, wherein the saposin-related product is a nucleic acid, e.g. RNA and/or DNA encoding a saposin-related protein product.

47. (Withdrawn) The use of claim 37, wherein the differentiation of progenitor, e.g. stem cells into insulin-producing cells in vitro comprises
 - a) optionally activating one or more pancreatic genes in progenitor cells,
 - b) optionally aggregating said cells to form embryoid bodies,
 - c) cultivating said cells or embryoid bodies in specific differentiation media containing saposin-related protein product and
 - d) identifying and optionally selecting insulin-producing cells.
48. (Withdrawn) The use of claim 47, wherein the saposin-related treated insulin producing cells are
 - (i) capable of a response to glucose and/or
 - (ii) capable of expressing glucagon.
49. (Withdrawn) The use of claim 47, wherein the saposin-related insulin producing cells are capable of normalizing blood glucose levels after transplantation into mice.
50. (Withdrawn) The use of claim 37, wherein an effective amount of in vitro saposin-related cells are transplanted to a patient in need.
51. (Withdrawn) The use of claim 37, comprising a stimulation of saposin-related expression, wherein cells from a patient in need that have been modified to produce and secrete a saposin-related protein product in vitro are re-implanted into the patient and/or wherein cells of a patient in need are modified to produce and secrete a saposin-related protein product in vivo.

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Response to Office Action of March 13, 2007

Page 5 of 8

52. (Withdrawn) A method for differentiating or regenerating cells into functional pancreatic cells, the method comprising: (a) cultivating cells capable of being differentiated or regenerated into pancreatic cells in the presence of an effective amount of a saposin-related protein in vitro (b) allowing the cells to develop, to differentiate and/or to regenerate at least one pancreatic function; and (c) optionally preparing an effective amount of the differentiated or regenerated pancreatic cells for transplantation into a patient in need thereof, particularly a human individual.
53. (Withdrawn) The method of claim 52, wherein the patient in need has (a) functionally impaired, (b) reduced numbers and/or (c) functionally impaired and reduced numbers of pancreatic cells.
54. (Withdrawn) The method of claim 52, wherein said patient in need is a type I diabetic patient or type II diabetic patient or LADA patient.
55. (Withdrawn) The method of claim 52, wherein the pancreatic cells are insulin-producing cells.
56. (Withdrawn) The method of claim 52, wherein the pancreatic cells are beta-cells of the pancreatic islets.
57. (Withdrawn) The method of claim 52, wherein the cells in step (a) are selected from embryonic stem cells, adult stem cells, or somatic stem cells.
58. (Withdrawn) The method of claim 52, wherein the cells in step (a) are of mammalian origin, preferably human origin.

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Page 6 of 8

59. (Withdrawn) The method of claim 52, wherein the protein is added at concentrations between 1 ng/ml and 500 ng/ml, preferably between 10 and 100 ng/ml, more preferably at about 50 ng/ml.
60. (Withdrawn) The method of claim 52, wherein the at least one pancreatic function is selected from insulin production in response to glucose and expression of glucagon.
61. (Withdrawn) A method for differentiating or regenerating cells into functional pancreatic cells, the method comprising: preparing an effective amount of a saposin-related product or of cells capable of expressing a saposin-related product for administration to a patient in need thereof.
62. (Withdrawn) The method of claim 61, wherein the saposin-related product is a protein or a nucleic acid.
63. (Withdrawn) The method of claim 61, wherein cells have been modified to produce and secrete a saposin-related protein product and are prepared for transplantation into a suitable location in the patient.

Claims 64-82 (Cancelled)

83. (New) The use of claim 37, wherein the insulin producing cells have been transfected with a Pax4 gene.
84. (New) The use of claim 37, wherein the insulin producing cells are of human origin.